REMARKS

Claims 1-84 are in the application.

Regarding claims 1-52, 81-84, the claims have been amended to define more clearly that the two or more entities interconnected by the one or more backplane connections comprise a network entity, and that the "proprietary control information" is "control information that is recognized by the network entity but not generally recognized by other network entities." This amendment is supported, for example, by page 17, line 14, describing an embodiment where the two or more entities interconnected by the one or more backplane connections comprise a network entity that is a switch, and page 12, lines 13-16, describing an embodiment where the proprietary control information is recognized by the switch but not generally recognized by other network entities. Since the claims now expressly define this term, the indefiniteness rejection of these claims should be withdrawn.

To address the prior art rejections, it is useful to consider the claims in three groups: 1) claims 1-52, 81-84; 2) claims 53-64; and 3) claims 65-80.

Claims 1-52, 81-84

Claims 1-52, 81-84 distinguish over the cited art (Shankar, Williams, Lou) on three grounds. First, the cited references do not teach or suggest communicating "proprietary control information" as defined by the claims. Second, the cited references do not teach or suggest doing so over backplane connections. Third, the cited references do not teach or suggest having the proprietary control information replace or appear in the packet to at least other network entity as at least a portion of "one or more standard packet fields."

Regarding the first distinction, although the Examiner apparently considers a source address to be "proprietary control information," (*see* Office Action, page 3), that is incorrect because this field is generally recognized by other network entities, and therefore, does not constitute "proprietary control information" as defined by the claims.

Regarding the second distinction, the Examiner's position is that it would have been obvious to replace Service Provider Network ("SPN") 20, shown in Figs. 1-2 of Shankar, with backplane connections, but that position is incorrect because the claims

define a "backplane connection" as having two properties: 1) it avoids "functioning as a user interface," and 2) it interconnects one or more entities that comprise a network entity. However, as the Examiner acknowledges, SPN 20 does not meet either of these requirements because, as Shankar teaches, SPN 20 is a "packet switched network, such as the Internet," that delivers "Ethernet or other service to multiple customers geographically dispersed across [the] network." (*see* pars. 29-30, Shankar), and one of ordinary skill in the art would have understood that such a network must necessarily 1) function as a user interface; and 2) interconnect unrelated network entities associated with different customers, in order to fulfill its intended purpose of delivering Ethernet or other service to "multiple customers." One of ordinary skill in the art would also have understood that replacing SPN 20 with backplane connections would have resulted in a network that does not fulfill its intended purpose of delivering Ethernet or other services to multiple customers geographically dispersed across the network. Therefore, one of ordinary skill in the art would not have been motivated to replace SPN 20 in Shankar with one or more backplane connections. Absent any motivation to replace SPN 20 with backplane connections, the Examiner's obviousness position is based on impermissible hindsight.

Another problem with the Examiner's position is that it depends on a definition of "backplane connection" that is at odds with the definition recited in the claims. (*See* Office Action, page 3, setting forth Examiner's unilateral definition of "backplane connection."). That is improper because a patentee is entitled to be his own lexicographer.

Because of these two infirmities, contrary to the Examiner's position, it would not have been obvious to replace SPN 20 in Shakar with backplane connections as that term is defined in the claims.

Regarding the third distinction, the Examiner contends that this distinction is met by par. 43 of Shankar. However, this paragraph, which is reproduced below, merely describes inserting a VLAN tag into a packet. It does not teach or suggest the requirement of the claims that the "proprietary control information," as stored in the packet, replace or appear to one or more other network entities as at least a portion of a standard packet field. For example, nothing in par. 43 indicates that the source address,

which the Examiner considers to be the "proprietary control information," replaces the inserted VLAN tag, so that this information can be transmitted in-band, as described at page 21, lines 20-25, and nothing indicates that this source address as stored in the packet appears to other network entities as a VLAN, as described at page 19, lines 3-5, to prevent hacking by third parties. Therefore, par. 43 of Shankar does not in fact meet this limitation. The Examiner's position, that par. 43 meets this limitation, is incorrect.

> **[0043]** The destination address field can be a bit value that can be used by the receiving Media Access Controller (MAC), in order to determine if the incoming packet is addressed to the particular port. There can typically be three types of destination addresses i) unicast/individual or physical DA, ii) multicast or logical DA and iii) broadcast DA. The source address field can be a bit value and can be supplied by the transmitting MAC, which can inserts its own unique address into the source address field as the frame is transmitted, indicating it was the original station. The receiving MAC is not required to take action based on the source address field. Furthermore, the customer VLAN ID tag is a first packet tag inserted within the packet. The VLAN ID tag can identify a particular VLAN for a unique customer. In other words, if a customer has a plurality of VLANs, such as VLAN 1, VLAN . . . VLANn, the customer VLAN ID tag can identify the packet as originating from one of the customer's VLANs. The T/L field can provide the type or the length of the packet. The payload P can contain the actual frame data that is being transferred.

For all the foregoing reasons, claims 1-52, 82-84 patentably distinguish over the cited references on at least three grounds.

Claims 53-64

Regarding claims 53-64, these claims are directed to performing load balancing over a plurality of backplane connections where a "backplane connection," as indicated previously, has the following two properties: 1) it avoids "functioning as a user interface," and 2) it interconnects one or more entities that comprise a network entity. The Examiner's position is that it would have been obvious to perform load balancing over backplane connections in view of Shankar and Bare, but that position is untenable for the reasons stated above with respect to claims 1-52, 81-84, but also because Bare does not fill the gaps in teaching of Shankar, as Bare's teachings are limited to switch-to-switch

network load balancing, (*see* Abstract), and thus provide no suggesting of load balancing over backplane connections.

Therefore, claims 53-64 are patentable over Shankar and Bare.

Claims 65-80

These claims have been amended to recite that the first switch has a greater number of ports (n) than that of the second switch (m), and that, from the standpoint of the network, the second switch appears to have n ports. This amendment is supported, for example, by page 25, line 30, to page 26, lines 1-2, page 27, lines 1-2.

The Examiner's position is that Fig. 25A, and Col. 30:20-25 of Lou, teaches or suggests the limitations of these claims, but that is incorrect. Referring to Fig. 25A of Lou, reproduced, below, that figure merely shows a single packet switch 2510, which may or may not have the same number of ports (8) as the port interface 2512. As to Col. 30:20-25, that passage merely suggests increasing or decreasing the number of ports in the port interface 2512. There is absolutely nothing in this figure or passage that teaches or suggests coupling switch 2510 to a second switch, with a greater number (n) of ports than the number of ports (m) of the first switch, and configuring the same such that, from the standpoint of the network, the first switch appears to have the number of ports (n) of the second switch. Therefore, Shankar and Lou do not in fact meet these claims.

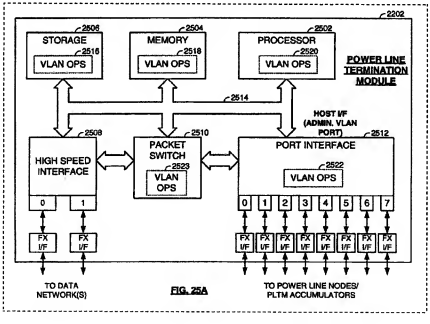

FIG. 25A

Conclusion

For all the foregoing reasons, the Examiner is earnestly solicited to allow all claims and pass this application to issuance. Early notification of allowance is earnestly solicited.

Respectfully submitted,

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